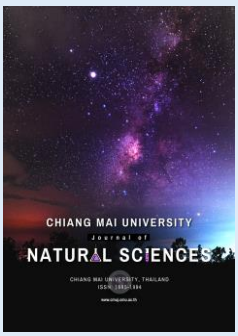

Editor:
Wasu Pathom-aree,
Chiang Mai University, Thailand

Article history:
Received: February 6, 2020;
Revised: May 12, 2020;
Accepted: May 27, 2020;
https://doi.org/10.12982/CMUJNS.2021.026

Corresponding author:
Modrak Vladimir,
E-mail: *vladimir.modrak@tuke.sk*

Research article

Optimizing Lot-Sizes and Scheduling in Terms of Mass Customization

Modrak Vladimir[1,*], Soltysova Zuzana[1] and Semanco Pavol[2]

1 Faculty of Manufacturing Technologies, Technical University of Kosice, Presov 08001, Slovensko
2 Lear corporation, Presov 08001, Slovakia

Abstract The goal of mass customisation is to offer products tailored to the specific needs of the customers. Even though customers are aware that manufacturers need a certain time to produce and deliver customised products, the companies might guarantee that their products will arrive on time. Then, the objective of manufacturing managers is to minimise the total flow time of parts through the shop. One of the effective ways to reach this objective is to optimise schedules in order to satisfy the due date criterion, which plays a crucial role in the mass customisation environment. This paper, in the first part, outlines methodological tools to tackle the problem of shortening delivery times through scheduling and management of resources. In the second part of the paper, the proposed methodology framework through the theoretical example is applied.

Keywords: Batch size, Due date, Mass customisation, Scheduling software

Funding: This publication presents the partial results of the project that received funding from the European Union's Horizon 2020 research and innovation program under the Marie Skłodowska-Curie grant agreement Number 734713. Moreover, the authors wish to acknowledge the contribution of the Scientific Grant Agency of the Slovak Republic -VEGA under the grant No. 1/0419/16.

Citation: Vladimir, M., Zuzana, S., and Pavol, S. 2021. Optimizing lot-sizes and scheduling in terms of mass customization. CMUJ. Nat. Sci. 20(2): e2021026